strains showed positive to KPC gene test in 46 strains of resistance to ipepenem(sensitivity rate:91.3%). 1 strains showed positive to KPC resistance test in the only case of intermediate result.
Conclusion: Positive result in Imepenem-intermediate or Imepenem-resistance of Enterobacteriaceae showed high risk of KPC gene. Therfore, isolation of such cases and environment sterilization was suggested for avoiding the spread of KPC strain.

Table 1: KPC-positive strain in CRE in 2014.

Bacteria	No.	No. of KPC+(sensitivity rate)
Klebsiella pneumonia	83	42(50.6%)
Klebsiella oxytoca	1	1(100%)
Escherichia coli	22	0(0%)
Citrobacter freundii	1	0(0%)

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MULTIDRUG-RESISTANT *ACINETOBACTER* BACTERIA DID NOT DEMONSTRATE INCREASED LETHALITY IN *GALLERIA MELLONELLA* INFECTION MODEL

Mamie HUI, C. H. A. N. Fu-Tim, C. H. E. U. N. G. Yuk-Yam, C. H. O. W. Chi-Ying. *Department of Microbiology, The Chinese University of Hong Kong, The Prince of Wales Hospital, Shatin, Hong Kong Special Administrative Region*

Purpose: Multidrug-resistant Acinetobacter bacteria (MRAB) are important pathogen with the potential of causing nosocomial outbreaks. In this study, we aimed to investigate the lethality of a cohort of clinical and environmental MRAB in an invertebrate infection model.
Methods: Susceptible type strain of *Acinetobacter baumanii* ATCC19606 was used as control. MRAB isolates were collected from surveillance samples from patients and hospital environmental surveillance swabs. The bacterial identities were confirmed by biochemical characteristics and by automated method with Vitek-2. Presence of colonial mucoidy was also noted. The isolates were tested for antibiotic susceptibilities according to CLSI methods and interpretations. Isolates which were resistant to beta-lactams, aminoglycosides, fluoroquinolones were included. *Galleria mellonella* larvae at the final instar (250 − 350g per larva) were used as the infection model. Ten microlitre of MRAB at 10^6/mL were injected into the left first proleg. Lethality was observed daily for 7 days. Sterile water and untraumatised larvae were used as control. Each set consisted of 10 larvae. All tests were done in duplicates.
Results: Eight strains of MRAB isolates were collected. Four from patients' surveillance cultures, another four from environmental surveillance cultures. Two isolates each from the patients' and environmental cultures were noted to be mucoid. All larvae infected with MRAB and the susceptible strain (ATCC 19606) survived up till day 7 of observation.
Conclusions: Lethality of *Galleria mellonella* larvae was not increased by the infection of susceptible or resistant Acinetobacter bacteria. It is also not affected by the origin of isolation (from patients or from environment), nor the presence of mucoidy. It is possible that these factors did not contribute to increase in virulence. However, a virulent strain of Acinetobacter bacteria needs to be established to confirm these findings.

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AN ANALYSIS OF CARBAPENEM RESISTANT ENTEROBACTERIACEAE, ASSOCIATED NOSOCOMIAL INFECTIONS, AND CONTACT ISOLATION MEASURES

Chiung-Yin Chuang. *Department of Laboratory, St. Martin De Porres Hospital, Taiwan*

Introduction
With population aging in Taiwan, more and more elderly rely on long-term care facilities. Long-term care residents depend on mechanical ventilators, endotracheal tubes, or catheters for life extension but these devices increase the risk of infection. The over and improper use of antibiotics results in multiple drug-resistant strains.
Methods and results: Carbapenem resistant enterobacteriaceae (CRE) was collected from January 2013 to June 2014. There were 26 cases and 27 CRE strains were isolated. 24 Klebsiella pneumoniae (24/27=89%), and 3 Escherichia coli (3/27=11%) were isolated , including 6 strains with KPC gene (6/27=22%)。 The number of specimen from urine, wound, and sputum are 18, 4, and 5, respectively. In these 26 cases, 10 were from long-term care facilities. They were prolonged bed rest required and 5 of them with KPC gene. In addition, 14 cases were expired (14/26=54%), including 4 with KPC gene.
Conclusions: CRE infection usually results in increment of length of stay and mortality. In order to prevent the spread of resistant strains, Infection Control Center modified the infection control procedures as following,(1)to send the report of resistant strains to clinical unit, infection control unit, and physicians automatically;(2)to use the information system to assist the management of antibiotics;(3)to carry out the screening program of long-term care residents; (4)to follow up the bacterial culture of CRE cases;(5)to implement and check the disinfection of environment and equipment and to promote the hand hygiene actively;(6)to educate and assess the caregivers and family about the knowledge of infection control.

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THE EPIDEMIOLOGY OF *C. DIFFICILE* INFECTION IN WESTERN AUSTRALIA, 2011−2012

Claudia Slimings [a], Cédric Mahé [b], Thomas V. Riley [a]. [a]*The University of Western Australia;* [b]*Sanofi Pasteur*

Purpose: *Clostridium difficile* infection (CDI) is the most common cause of infectious diarrhoea in hospitalised patients. In Western Australia (WA) surveillance for CDI is mandatory for most hospitals and it is the only State in Australia that routinely ribotypes *C.difficile* strains isolated from hospital-identified CDI (HI-CDI). The aims of the study were to (i) describe the characteristics of HI-CDI cases, (ii) determine the rate of hospital-associated CDI (HA-CDI) by population characteristics, (iii) compare characteristics of HI-CDI cases and non-cases.
Methods: The study was a retrospective, population-based cohort study. CDI surveillance data from 01/07/2011 to 30/06/2012 were linked to records of admissions to WA hospitals over the same time period held in the Hospital Morbidity Data System. The incidence of HA-CDI was calculated as the number of HA-CDI episodes per 10,000 patient days (PD) per month.
Results: The study population consisted of 345,356 individuals aged ≥18 years who had at least one inpatient separation record in WA hospitals during the study period. The median age was 52 years (range 18-106 years); 29.8% were aged ≥65 years and 55.9 % were female. There were 858 episodes of HI-CDI among 824 individuals. HA-hospital-onset (HA-HO) CDI accounted for 57.8%, HA-community-onset (HA-CO) for 13% and community acquired (CA) for 29% of infections. Ribotype 014/20 accounted for 30.6% of cases and was the most common strain in both HA and CA cases, followed by ribotype 002 (10%). The 12 month incidence of HA-CDI was 2.12/10,000 PD (95% CI 1.93-2.33) with a sharp increase in January 2012 for those age ≥50 years. Rates were highest in those with greater comorbidity.

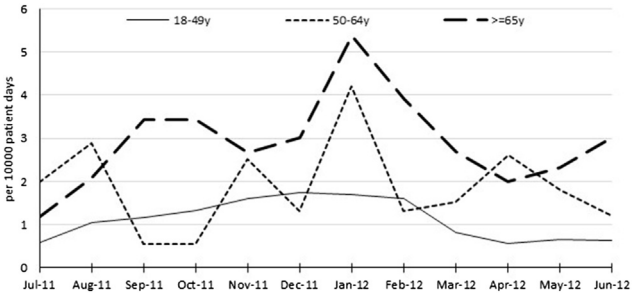

Figure.1 Incidence of HA-CDI by age group.

Conclusions: This study describes detailed epidemiology of CDI in WA made possible by the linkage of surveillance, ribotype and hospitalisation data. A significant proportion of infections identified by hospitals was community-acquired, highlighting the need to undertake specific community-based studies.